UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

SINGULAR COMPUTING LLC,	Civil Action No. 1:19-cv-12551-FDS
Plaintiff,	
v.	Hon. F. Dennis Saylor IV
GOOGLE LLC,	
Defendant.	

PLAINTIFF'S RESPONSE
TO DEFENDANT GOOGLE LLC'S SUPPLEMENTAL BRIEF IN OPPOSITION TO
SINGULAR'S MOTION *IN LIMINE* NO. 4

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

Plaintiff Singular Computing LLC ("Singular") hereby responds to Defendant Google LLC's ("Google") Supplemental Brief in Opposition to Singular's Motion *in Limine* No. 4, Dkt. No. 684 ("Supp. Br.").

I.   INTRODUCTION

The Court should reject Google's latest attempt to evade IPR estoppel by introducing new evidence and new legal theories about what it calls the "VFLOAT system." The evidence Google has provided relating to the public use, knowledge, or availability of the "VFLOAT system" is both irrelevant and confusing because most of it is about the VFLOAT *tool*, a software package that is wholly distinct from the allegedly invalidating prior art. The evidence Google has provided also relies on material that Google is estopped from using under this Court's clear and unambiguous order on IPR estoppel. Dkt. No. 447. Google now tells the Court that it plans to introduce yet more evidence at trial about VFLOAT, hitherto unseen. Google also plans to rely on legal theories that it first disclosed less than a month before trial is set to begin. For these reasons, evidence and testimony relating to Google's VFLOAT theories should be excluded, and Google should be prevented from arguing invalidity based on the "VFLOAT system."

II.   BACKGROUND

The relevant facts are detailed in Singular's initial Motion (Dkt. No. 620), and only briefly summarized herein.

Under this Court's prior rulings, Google is estopped from arguing that the asserted claims are invalid in light of certain printed publications including, *inter alia*, Pavle Belanović's thesis ("the Belanović thesis"). *See* Dkt. No. 447 (Order on IPR Estoppel). The Belanović thesis was explicitly cited by Google in the IPR proceedings and is estopped for this reason alone. *See id.* at 12 ("References that Google explicitly cited to in the IPR proceedings clearly fall within the

1

estoppel bar of § 315(e)(2)"); *see also* IPR2021-00165, Exhibit 1084 (the Belanović thesis). The

Belanović thesis was also cited by Google in its Preliminary Invalidity Contentions, which also

makes it subject to IPR estoppel under the Court's Order. *See* Dkt. No. 447 at 13 ("Google will

be estopped from asserting invalidity based on the printed publication and patent references

identified in its invalidity contentions"): *See* Ex. B[1] (Google's Preliminary Invalidity

Contentions) at 6 (listing the Belanović thesis as a Prior Art Reference); *see also id.* at 16

(specifically noting that the Belanović thesis "render[s] every claim in the asserted patents

obvious").

     After the IPR proceedings reaffirmed the validity of the Asserted Claims and triggered

estoppel for a number of references including the Belanović thesis, Dr. Miriam Leeser (one of

Google's expert witnesses on the issue of invalidity) opined that the asserted claims are

anticipated and obvious based on alleged public knowledge and/or use of what she calls "the

VFLOAT system," a system allegedly described in the Belanović thesis. *See* Ex. A (Leeser Rpt.)

¶¶ 19-20. The "VFLOAT system" is one of thirty circuit configurations that was allegedly

created and placed on a reconfigurable chip by Belanović during an experiment conducted in Dr.

Leeser's laboratory at Northeastern University in early 2002. *See generally id.* ¶¶ 110-123.

     Google argues that the asserted claims are invalid over the "VFLOAT system," but it has

yet to submit any evidence that "the VFLOAT system" existed for any longer than the brief time

period while Belanović conducted his experiment. Google does not allege or provide any

evidence showing that any member of the public was present in the laboratory while the

experiment was being performed. Google does not dispute that if members of the public had

inadvertently wandered into the laboratory at the precise moment when the alleged "VFLOAT

---

[1] Exhibits A through D were attached to the original motion *in limine* No. 4 at Docket Nos. 619-1 through 619-4, respectively. Subsequent Exhibits are attached hereto.

system" existed, they would have seen only a featureless computer like any other, without any hint as to the system's structure or operation, as Singular's initial Motion explained. All Google is left with as evidence is the Belanović thesis, which is estopped.

III.   DISCUSSION

A.   Singular's MIL No. 4 is a timely motion *in limine*.

Singular's motion *in limine* seeks to exclude irrelevant and confusing evidence relating to Google's VFLOAT arguments. *See* Fed. R. Evid. 402 ("Irrelevant evidence is not admissible."); Fed. R. Evid. 403 ("The court may exclude relevant evidence if its probative value is substantially outweighed by a danger of . . . confusing the issues[or] misleading the jury . . . ."). This includes evidence relating to the Belanović thesis and any other IPR-estopped publication, evidence about Dr. Leeser's other work that is unrelated to the "VFLOAT system," and evidence that appears to be designed to confuse the jury about the difference between the so-called "VFLOAT system" and the VFLOAT *tool*, a software package that is wholly distinct from the allegedly invalidating prior art.

Google alleges that Singular's MIL No. 4 improperly seeks "claim-dispositive relief," Supp. Br. at 2. However, Singular's motion merely seeks to exclude the irrelevant and confusing evidence and testimony that Google is planning to use to try to trick the jury at trial into believing that the "VFLOAT system" is prior art and is not subject to IPR estoppel. Without this irrelevant and confusing evidence, Google cannot support its invalidity arguments based on VFLOAT.

B.   None of the evidence cited by Google relates to the "VFLOAT System"

Google's Supplemental Brief alleges that there were "numerous public disclosures relating to the VFLOAT system." Supp. Br. at 5. Not so.

The evidence shows that the "VFLOAT system" was disclosed to the public exactly once: in the IPR-estopped Belanović thesis. Because the Belanović thesis is estopped, Google is forced to rely on other evidence to support its claims that the "VFLOAT system" qualifies as prior art under § 102. But no other evidence – including Dr. Leeser's other publications, her conference presentations, or any other public disclosure of her work – makes any mention whatsoever of the fleeting, experimental "VFLOAT system," which allegedly included 61 C2 multipliers on a single FPGA chip. Every other piece of evidence presented by Google, including the barrage of irrelevant facts included in its Supplemental Opposition, relates not to the "VFLOAT System," but instead to the VFLOAT *tool*, which is a software tool used to create the "VFLOAT System." Google has not explained how a single example of evidence that it plans to use at trial is relevant to the question of whether the "VFLOAT system"—as opposed to the VFLOAT tool—was publicly known or used.

Indeed, Google now denies that there is any difference at all between the VFLOAT tool and the "VFLOAT system," and argues in its Supplemental Opposition that they are the same thing. *See* Supp. Br., pp. 6-7. But, as explained in Singular's original motion (and not disputed by Google), the VFLOAT tool is a software package that was allegedly used to create the "VFLOAT system".

By analogy, Michelangelo's famous sculpture of David was made with a chisel. But Michelangelo's David *is not a chisel*. They are two totally different things. Similarly, the fact that the VFLOAT tool was used to create the "VFLOAT system" does not mean that they are the same thing, or that evidence relating to one has any bearing on evidence relating to the other. Google has tried to sweep this distinction under the rug by calling the 61-C2-multiplier system allegedly disclosed in the Belanović thesis the "VFLOAT system." This moniker was clearly

4

chosen to sow confusion, and to encourage the jury to conflate the VFLOAT tool and the "VFLOAT system."

Further, none of the cases cited by Google support its argument that the "VFLOAT system," as distinct from the VFLOAT tool, was accessible to the public. *See* Supp. Br. at 4-5. For example, Google quoted *NYKO Techs. Inc. v. Energizer Holdings Inc.*, No. 12-cv-3001, 2013 WL 11232100, at *13 (C.D. Cal. Oct. 22, 2013), for the proposition that "[e]ven if the device had been shown only to one person in a back alley in the dead of night, it would constitute a public use …" The *NYKO* holding appears to set a relatively low threshold for meeting the public use requirement under § 102, but Google fails to meet even this threshold. Google has adduced no evidence that anyone—in a back alley or otherwise[2]—ever observed the "VFLOAT system."

Thus, none of Google's evidence about the public use, knowledge, or availability of VFLOAT goes to the "VFLOAT system." It all goes to the public use, knowledge, or availability of the VFLOAT tool. Therefore, Google's evidence is irrelevant, it is presented in a deliberately confusing way, and it should be excluded.

C.   The "VFLOAT system" does not qualify as prior art under 35 U.S.C. § 102(g)(2).

Google now argues that the "VFLOAT system" also may qualify as invalidating prior art under 35 U.S.C. § 102(g)(2). There are several problems with this theory.

1.   The "VFLOAT system" was not made by "another inventor"

First, § 102(g)(2) only applies to prior art that was made by "another *inventor*." 35 U.S.C. § 102(g)(2). Google has not alleged, or provided any evidence to show, that the "VFLOAT

---

[2] It is worth noting in passing that a "back alley" is at least a public venue, while a closed laboratory at Northeastern University, open to only a few select members of the Computer Science department, is not.

system" was made by "another inventor." Dr. Leeser has not alleged that she "invented" anything, and certainly mentioned nothing about being "an inventor" of invalidating prior art in her December 22, 2022 expert report. Even if Dr. Leeser were to claim that she is an "inventor" of the invention-in-suit, such a claim would require corroborating evidence, which Google has failed to provide. *Wagner v. Ashline*, No. 2021-1715, 2021 WL 5353889, at *4 (Fed. Cir. Nov. 17, 2021).

The first time Google floated the notion of Dr. Leeser being "an inventor" was in a notice served on Singular three days after Singular filed this motion. *See* Ex. E (Google's Dec. 8, 2023 Notice). Google's notice was served under the notice provision of 35 U.S.C. § 282(c), which establishes that invalidity theories and evidence must be provided to a patentee at least 30 days before a scheduled trial.

As an initial matter, Google's notice, served less than a month before trial is set to begin, is untimely and should be stricken on that ground alone. Section 282(c) sets a *minimum* period of notice, which may be altered by court order or local rule. *See ATD Corp. v. Lydall, Inc.,* 159 F.3d 534, 551 (Fed. Cir. 1998) ("[W]hen the court has set and the parties have agreed to a discovery period, that procedure necessarily governs that trial. Thus although § 282 sets a minimum period for the identification of prior art to be introduced as evidence of anticipation, a specific judicial directive for the timing of discovery establishes the procedures to which the parties are bound."); *see also id.* ("The purpose of § 282, like that of the Federal Rules, is to prevent unfair and prejudicial surprise, not to facilitate last-minute production of evidence."). Thus, § 282(c) does not supersede the deadlines set by this Court, including the deadlines relating to invalidity contentions that are imposed by Local Rule 16.6(d). With this background in mind, the Court should refuse to entertain this new invalidity theory under § 102(g)(2), which was raised by

Google for the first time more than two years after the close of fact discovery, and a mere

handful of weeks before trial is scheduled to begin. To do otherwise would be enormously

prejudicial to Singular.

Further, Google's notice is insufficient. It states, in relevant part:

> The following person may be relied upon as the prior inventor, as having prior
> knowledge of, or as having previously used or offered for sale the invention of the
> patents-in-suit: Prof. Miriam Leeser

Ex. E (Google's Dec. 8, 2023 Notice). Here, Google alleges that Dr. Leeser invented, had prior

knowledge of, used, _or_ offered for sale the invention of the patents-in-suit. It appears that even

Google is unwilling to clearly identify Dr. Leeser as an "inventor" under § 102(g)(2).

One likely explanation for Google's hesitancy is the fact that Dr. Leeser was clearly _not_

an inventor of the "VFLOAT system." As explained above, the "VFLOAT system" is only

mentioned in a single public disclosure: the Belanović thesis. This document is called "the

Belanović thesis" because it was written by Belanović, not Leeser.

Therefore, Google's § 102(g)(2) defense fails because Google has not argued, and has

failed to provide any evidence or testimony showing, that Dr. Leeser is "an inventor" as required

by the statute.

2.   The "VFLOAT system" was "suppressed, abandoned, or concealed"

§ 102(g)(2) only applies to art that was not "suppressed, abandoned, or concealed." The

relevant law holds that a system should be deemed suppressed, abandoned, or concealed "if,

within a reasonable time after completion, no steps are taken to make the invention publicly

known." _Apotex USA, Inc. v. Merck & Co._, 254 F.3d 1031, 1039 (Fed. Cir. 2001).

As explained above, the only mention of the "VFLOAT system" in any public disclosure

is in the Belanović thesis. Thus, the only evidence Google might use to argue that the

"VFLOAT" system was not suppressed, abandoned, or concealed is the Belanović thesis. Not

only is Google prevented from using this reference by IPR estoppel, but also the very foundation

of its current argument rests on the notion that the "VFLOAT system" was *not* fully disclosed in

the Belanović thesis. Google argued before this Court that the "VFLOAT system" is not subject

to IPR estoppel because there is "information that Dr. Leeser as a percipient witness is going to

provide about the VFLOAT system" that is "not disclosed in any one of the printed

publications," including the Belanović thesis. Ex. F (Jan 11, 2023 Hearing Tr.) at 23-24.

Therefore, based on Google's own representations to the Court, the "VFLOAT system"

was "suppressed, abandoned, or concealed" because key aspects of this system (i.e., the aspects

that were "not disclosed in any one of the printed publications") were *never* disclosed to the

public, and can be learned only through Dr. Leeser's percipient testimony.

D.   The Belanović Thesis is a Printed Publication

Google also attempts to cast doubt on the notion that the Belanović thesis is a "printed

publication" under § 102. *See* Supp. Br., pp. 10-12.

However, *Google itself* identified the Belanović thesis as a printed publication in its

Preliminary Invalidity Disclosures. *See* Ex. B (Google's Preliminary Invalidity Contentions) at 6

(listing the Belanović thesis as a Prior Art Reference); *see also id.* at 16 (specifically noting that

the Belanović thesis is an example of prior public use and disclosure that "render[s] every claim

in the asserted patents obvious"). Dr. Leeser also provided details about the public nature of the

Belanović Thesis. *See* Ex. A (Leeser Rpt.), ¶¶ 125-128. Finally, the Internet Archive shows that

the Belanović thesis was available to the public at least as early as September 8, 2006.[3]

---

[3] *See*
https://web.archive.org/web/20060908083255/http://www.ece.neu.edu/groups/rcl/theses/belanovic2002.pdf

In short, before it lost the IPRs, Google asserted that the Belanović thesis *is* § 102 printed prior art. Now Google argues the opposite, even as it relies on the Belanović thesis as evidence of public knowledge and use and lack of suppression of concealment under § 102 (g)(2). This kind of self-serving sophistry should not be permitted by the Court.

IV.   CONCLUSION

For the foregoing reasons, Singular respectfully requests that the Court grant its Motion *in Limine* No. 4.

Dated: January 3, 2024

Respectfully submitted,

/s/ Kevin Gannon
Matthew D. Vella (BBO #660171)
Adam R. Doherty (BBO #669499)
Kevin Gannon (BBO #640931)
Brian Seeve (BBO #670455)
Daniel McGonagle (BBO #690084)
PRINCE LOBEL TYE LLP
One International Place, Suite 3700
Boston, MA 02110
Tel: (617) 456-8000
Email: mvella@princelobel.com
Email: adoherty@princelobel.com
Email: kgannon@princelobel.com
Email: bseeve@princelobel.com
Email: dmcgonagle@princelobel.com

Kerry L. Timbers (BBO #552293)
SUNSTEIN LLP
100 High Street
Boston, MA 02110
Tel: (617) 443-9292
Email: ktimbers@sunsteinlaw.com

ATTORNEYS FOR THE PLAINTIFF

CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system.

/s/ Kevin Gannon

10